

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) Device for recording information, the information including real-time data within a real-time data stream in accordance with a predefined recording format, which device comprises

recording means for recording optically detectable marks in a track on a record carrier representing the information in information blocks having logical addresses, and

control means for controlling the recording by locating each information block at a separate physical address in the track, the control means comprising:

allocation means for generating and maintaining the allocation information, the allocation information including at least one logically contiguous range of blocks allocated to at least a part of the real-time data stream,

addressing means for translating the logical addresses into the physical addresses and translating the physical addresses into logical addresses in dependence on allocation information,

auxiliary data means for processing auxiliary data related to the real-time data and for recording the auxiliary data as auxiliary blocks on the record carrier, the auxiliary data means being coupled to the allocation means, whereby the allocation means assigns a physical addresses to the auxiliary information blocks, which physical addresses of the auxiliary blocks are excluded from allocation to logical addresses and are within or near a

physical address range, which physical address range is allocated to the said part of the real-time data stream corresponding to the at least one logically contiguous range of information blocks.

2. (Previously Presented) Device as claimed in claim 1, wherein the auxiliary data means comprise:

meta-data means for generating and maintaining meta-data for controlling the rendering of the real-time data stream and for recording at least part of the meta-data relating to said part of the real-time data stream on the record carrier after recording said part of the real-time data stream, and

recovery means for generating recovery data for enabling a retrieval of real-time data for which corresponding meta-data has not been recorded and for recording the recovery data in the auxiliary information blocks.

3. (Previously Presented) Device as claimed in claim 2, wherein the recovery means are arranged for recording recovery status information at a predefined location on the record carrier.

4. (Previously Presented) Device as claimed in claim 2, further comprising a non-volatile memory, and the recovery means are arranged for storing recovery status information regarding said generating of recovery data in the non-volatile memory.

5. (Previously Presented) Device as claimed in claim 4, wherein the recovery means are arranged for generating the recovery status information including pointer information for indicating a location of a recovery block.
6. (Previously Presented) Device as claimed in claim 2, wherein the recovery means are arranged for generating recovery data for recovering allocation information which has not been recorded.
7. (Previously Presented) Device as claimed in claim 2, wherein the auxiliary data means are arranged for including in the auxiliary information blocks a unique signature and/or pointer information to other auxiliary information blocks.
8. (Previously Presented) Device as claimed in claim 1, wherein the auxiliary data means are arranged for controlling the allocation means for allocating at least two consecutive physical addresses to the auxiliary information blocks.
9. (Previously Presented) Device as claimed in claim 1, wherein the auxiliary data means are arranged for controlling the allocation means for allocating physical addresses for auxiliary blocks in dependence on defect management information, by allocating physical addresses in a defect management area or by allocating physical addresses near bad blocks.
10. (Previously Presented) Device as claimed in claim 2, wherein the recovery means are arranged for controlling the allocation means for de-allocating physical addresses previously

allocated to the recovery information blocks for said part of the real-time data stream after recording of the meta-data corresponding to said part.

11. (Currently Amended) Device for reading information, the information including real-time data of a real-time data stream in accordance with a predefined recording format, which device comprises

reading means for reading optically detectable marks in a track on a record carrier representing the information in information blocks having logical addresses, and

control means for controlling the reading by locating each information block at a separate physical address in the track, the control means comprising:

Allocation means for generating and maintaining the allocation information, the allocation information including information about at least one logically contiguous range of information blocks allocated to at least a part of the real-time data stream,

addressing means for translating the logical addresses into the physical addresses and translating the physical addresses into logical addresses in dependence on allocation information, and

auxiliary data read means coupled to the allocation means for processing auxiliary data related to the real-time data and for reading the auxiliary data as auxiliary information blocks from the record carrier,

the auxiliary data information blocks having physical addresses that are excluded from allocation to logical addresses and are within ~~or near~~ a physical address range corresponding to the at least one logically contiguous range of blocks allocated to the said part of the real-time data stream.

12. (Previously Presented) Device as claimed in claim 11, wherein the auxiliary data read means comprise

meta-data read means (38) for controlling rendering of the real-time data stream in dependence on meta-data and for reading the meta-data relating to said part of the real-time data stream on the record carrier, and

recovery means for reading recovery data from the auxiliary information blocks and for retrieving real-time data for which corresponding meta-data has not been recorded in dependence on the recovery data.

13. (Currently Amended) Method of recording information in a track on a record carrier, the information including real-time data of a real-time data stream in accordance with a predefined recording format, which method comprises

recording the information in information blocks having logical addresses, and

controlling the recording by locating each information block at a physical address in the track, which controlling comprises:

translating the logical addresses into the physical addresses and translating the physical addresses into logical addresses in dependence on allocation information,

generating and maintaining the allocation information, the allocation information including at least one logically contiguous range of information blocks allocated to at least a part of the real-time data stream,

processing auxiliary data related to the real-time data and for recording the auxiliary data as auxiliary information blocks on the record carrier, and

assigning physical addresses to the auxiliary information blocks, which physical addresses of the auxiliary information blocks are excluded from allocation to logical

addresses and are within ~~or near~~ a physical address range corresponding to the at least one logically contiguous range of blocks allocated to the said part of the real-time data stream.

14. (Previously Presented) Method as claimed in claim 13, wherein the step of processing auxiliary data comprises:

generating and maintaining meta-data for controlling rendering of the real-time data stream, and recording at least part of the meta-data relating to said part of the real-time data stream on the record carrier after recording said part, and

generating recovery data for enabling retrieval of real-time data for which corresponding meta-data has not been recorded, and recording the recovery data in the auxiliary information data blocks.

15. (New) Device for recording information, the information including real-time data within a real-time data stream in accordance with a predefined recording format, which device comprises

recording means for recording optically detectable marks in a track on a record carrier representing the information in information blocks having logical addresses, and

control means for controlling the recording by locating each information block at a separate physical address in the track, the control means comprising:

allocation means for generating and maintaining the allocation information, the allocation information including at least one logically contiguous range of blocks allocated to at least a part of the real-time data stream,

addressing means for translating the logical addresses into the physical addresses and translating the physical addresses into logical addresses in dependence on allocation information,

auxiliary data means for processing auxiliary data related to the real-time data and for recording the auxiliary data as auxiliary blocks on the record carrier, whereby the auxiliary data means comprise:

meta-data means for generating and maintaining meta-data for controlling the rendering of the real-time data stream and for recording at least part of the meta-data relating to said part of the real-time data stream on the record carrier after recording said part of the real-time data stream, and

recovery means for generating recovery data for enabling a retrieval of real-time data for which corresponding meta-data has not been recorded and for recording the recovery data in the auxiliary information blocks.

the auxiliary data means being coupled to the allocation means, whereby the allocation means assigns a physical addresses to the auxiliary information blocks, which physical addresses of the auxiliary blocks are excluded from allocation to logical addresses and are within or near a physical address range, which physical address range is allocated to the said part of the real-time data stream corresponding to the at least one logically contiguous range of information blocks.

16. (New) Device as claimed in claim 15, wherein the recovery means are arranged for recording recovery status information at a predefined location on the record carrier.

17. (New) Device as claimed in claim 15, further comprising a non-volatile memory, and the recovery means are arranged for storing recovery status information regarding said generating of recovery data in the non-volatile memory.

18. (New) Device as claimed in claim 15, wherein the recovery means are arranged for generating the recovery status information including pointer information for indicating a location of a recovery block.

19. (New) Device as claimed in claim 15, wherein the recovery means are arranged for generating recovery data for recovering allocation information which has not been recorded.

20. (New) Device as claimed in claim 15, wherein the auxiliary data means are arranged for including in the auxiliary information blocks a unique signature and/or pointer information to other auxiliary information blocks.

21. (New) Device as claimed in claim 15, wherein the auxiliary data means are arranged for controlling the allocation means for allocating at least two consecutive physical addresses to the auxiliary information blocks.

22. (New) Device as claimed in claim 15, wherein the auxiliary data means are arranged for controlling the allocation means for allocating physical addresses for auxiliary blocks in dependence on defect management information, by allocating physical addresses in a defect management area or by allocating physical addresses near bad blocks.

23. (New) Device as claimed in claim 15, wherein the recovery means are arranged for controlling the allocation means for de-allocating physical addresses previously allocated to the recovery information blocks for said part of the real-time data stream after recording of the meta-data corresponding to said part.

24. (New) Device for reading information, the information including real-time data of a real-time data stream in accordance with a predefined recording format, which device comprises

reading means for reading optically detectable marks in a track on a record carrier representing the information in information blocks having logical addresses, and

control means for controlling the reading by locating each information block at a separate physical address in the track, the control means comprising:

Allocation means for generating and maintaining the allocation information, the allocation information including information about at least one logically contiguous range of information blocks allocated to at least a part of the real-time data stream,

addressing means for translating the logical addresses into the physical addresses and translating the physical addresses into logical addresses in dependence on allocation information, and

auxiliary data read means coupled to the allocation means for processing auxiliary data related to the real-time data and for reading the auxiliary data as auxiliary information blocks from the record carrier, wherein the auxiliary data read means comprise

meta-data read means (38) for controlling rendering of the real-time data stream in dependence on meta-data and for reading the meta-data relating to said part of the real-time data stream on the record carrier, and

recovery means for reading recovery data from the auxiliary information blocks and for retrieving real-time data for which corresponding meta-data has not been recorded in dependence on the recovery data, and

the auxiliary data information blocks having physical addresses that are excluded from allocation to logical addresses and are within or near a physical address range corresponding to the at least one logically contiguous range of blocks allocated to the said part of the real-time data stream.

25. (New) Method of recording information in a track on a record carrier, the information including real-time data of a real-time data stream in accordance with a predefined recording format, which method comprises

recording the information in information blocks having logical addresses, and
controlling the recording by locating each information block at a physical address in the track, which controlling comprises:

translating the logical addresses into the physical addresses and translating the physical addresses into logical addresses in dependence on allocation information,

generating and maintaining the allocation information, the allocation information including at least one logically contiguous range of information blocks allocated to at least a part of the real-time data stream,

processing auxiliary data related to the real-time data and for recording the auxiliary data as auxiliary information blocks on the record carrier, and

assigning physical addresses to the auxiliary information blocks, which physical addresses of the auxiliary information blocks are excluded from allocation to logical

addresses and are within or near a physical address range corresponding to the at least one logically contiguous range of blocks allocated to the said part of the real-time data stream,

wherein the step of processing auxiliary data comprises:

generating and maintaining meta-data for controlling rendering of the real-time data stream, and recording at least part of the meta-data relating to said part of the real-time data stream on the record carrier after recording said part, and

generating recovery data for enabling retrieval of real-time data for which corresponding meta-data has not been recorded, and recording the recovery data in the auxiliary information data blocks.